

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:) Group Art Unit: To Be Assigned
)
BECKER) Examiner: To Be Assigned
)
Divisional application of:) Atty. Docket No. GP123-03.DV1
Application Serial No. 10/020,596)
)
Filed: November 12, 2003)
)
For: KIT FOR ENHANCING THE)
ASSOCIATION RATES OF)
POLYNUCLEOTIDES)

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. § 1.97(b)(1)**

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant brings to the Examiner's attention the references listed on the enclosed PTO/SB/08 forms (two copies of each) for consideration in connection with the examination of the above-identified application.

In accordance with 37 C.F.R. § 1.97(b)(1), this Information Disclosure Statement is being submitted within three months of the certified filing date of the instant application.

Applicant respectfully requests that the Examiner indicate consideration of the cited references by returning a copy of the enclosed PTO/SB/08 forms with the Examiner's initials or other appropriate marks.

IDS

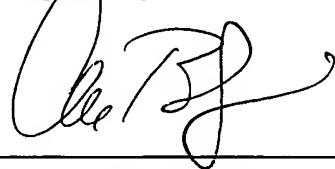
Divisional Application of
Application Serial No. 10/020,596
Atty. Docket No. GP123-03.DV1

No fee is believed due in connection with this Information Disclosure Statement. If Applicant is mistaken, please charge the amount due to Deposit Account No. 07-0835 in the name of Gen-Probe Incorporated.

Date: November 12, 2003

By:

Respectfully Submitted,



Charles B. Cappellari
Registration Number 40,937
Attorney for Applicants

GEN-PROBE INCORPORATED
Patent Department
10210 Genetic Center Drive
San Diego, California 92121
PH: 858-410-8927
FAX: 858-410-8928

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information

Approv
U.S. Patent and Trademark

Citations for New Divisional of Serial

No. 10/020,596

Attorney Docket No. GP123-03 DV1

Page 1 of 8

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Shee

1

of 8

Application Number

Filing Date

First Named Inventor

First Named Inventor

AN UNI

Examiner Name _____

Attorney Docket Number

Attorney Docket Number GP123-03 DV1

U. S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

¹EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ²Applicant's unique citation designation number (optional). ³See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ⁴Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁷Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Please type a plus sign (+) inside this box

+

Approved for use
U.S. Patent and Trademark Office

Citations for New Divisional of Serial

No. 10/020,596

Attorney Docket No. GP123-03.DV1

Page 2 of 8

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

1

of

1

Complete...now

Application Number 10/020,596

ing Date December

First Named Inventor **BECKER**

Group Art Unit

Examiner Name **Chakrabarti, A.**

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Approved for use under 1995 Act. OMB 0910-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				<i>Complete if Known</i>	
				Application Number	10/020,596
				Filing Date	December 7, 2001
				First Named Inventor	BECKER
				Art Unit	1634
				Examiner Name	Chakrabarti, A.
Sheet	2	of	2	Attorney Docket Number	GP123-02.UT

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ²
		MAJLESSI et al., "Advantages of 2'-O-methyl oligoribonucleotide probes for detecting RNA targets", Nucleic Acids Research, 1998, 26(9):2224-2229			
		MARUYAMA et al., "Characterization of Interpolyelectrolyte Complexes between Double-Stranded DNA and Polylysine Comb-Type Copolymers Having Hydrophilic Side Chains", Bioconjugate Chem., 1998, 9:292-299			
		TYAGI et al., "Molecular Beacons: Probes that Fluoresce upon Hybridization", Nature Biotechnology, 1996, 14:303-308			

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
U.S. GOVERNMENT PRINTING OFFICE: 2006 500-132-0162 (2006)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Application Number	10/020,596
		Filing Date	December 7, 2001
		First Named Inventor	BECKER
		Art Unit	1634
		Examiner Name	Chakrabarti, A.
Sheet	1	of	2
		Attorney Docket Number	

U. S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)	MM-DD-YYYY		T ⁶
		WO 95/06056 A1	03-02-1995	University of Medicine & Dentistry of New Jersey	
		WO 97/43450 A1	11-20-1997	Affymetrix, Inc.	
		WO 00/72016 A1	11-30-2000	Caliper Technologies Corp.	
		WO 03018841 A	06-03-2003	Circle for the Promotion of Science & Engineering	*

*English Language Abstract Attached

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Please type a plus sign (+) inside this box - - +

+

Approved for
U.S. Patent and Trademark Off
to a collection of information unles

Citations for New Divisional of Serial
No. 10/020,596
Attorney Docket No. GP123-03.DV1
Page 5 of 8

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 4

Complet if Known

Application Number	10/020,596
Filing Date	December 7, 2001
First Named Inventor	BECKER
Group Art Unit	1648
Examiner Name	Hill, M.
Attorney Docket Number	GP123-02.UT

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → **+**

Approved for
U. S. Patent and Trademark Of-

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unles

Citations for New Divisional of Serial
No. 10/020,596
Attorney Docket No. GP123-03.DV1
Page 6 of 8

Substitute for form 1449B/PTO.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

2

of

4

Complete if Known

Application Number	10/020,596
Filing Date	December 7, 2001
First Named Inventor	BECKER
Group Art Unit	1648
Examiner Name	Hill, M.
Attorney Docket Number	GP123-02.UT

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		ASAYAMA et al., "Design of Comb-Type Polyamine Copolymers for a Novel pH-Sensitive DNA Carrier", Bioconjug Chem, 1997 Nov-Dec;8(6):833-8, American Chemical Society, US	
		BLOOMFIELD, "Condensation of DNA by Multivalent Cations: Considerations on Mechanism", Biopolymers, 1991 Nov;31(13):1471-81, John Wiley & Sons Incorporated, US	
		BLOOMFIELD, "DNA condensation", Curr Opin Struct Biol, 1996 Jun;6(3):334-41, Current Biology Ltd., GB	
		FERDOUS et al., "Comb-Type Copolymer: Stabilization of Triplex DNA and Possible Application in Antigene Strategy", J Pharm Sci, 1998 Nov;87(11):1400-5, American Pharmaceutical Association, US	
		FERDOUS et al., "Inhibition of Sequence-Specific Protein-DNA Interaction and Restriction Endonuclease Cleavage via Triplex Stabilization by Poly(L-lysine)-graft-dextran Copolymer", Biomacromolecules, 2000 Summer;1(2):186-93, American Chemical Society, US	
		FERDOUS et al., "Mechanism of Intermolecular Purine-Purine-Pyrimidine Triple Helix Stabilization by Comb-Type Polylysine Graft Copolymer at Physiologic Potassium Concentration", Bioconjug Chem, 2000 Jul-Aug;11(4):520-6, American Chemical Society, US	
		FERDOUS et al., "Poly(L-lysine)-graft-dextran copolymer: amazing effects on triplex stabilization under physiological pH and ionic conditions (in vitro)", Nucleic Acids Res, 1998 Sep 1;26(17):3949-54, Oxford University Press, GB	
		FERDOUS et al., "Poly(L-lysine)-graft-dextran copolymer is a novel stabilizer of triplex DNA(II): potassium-insensitive triplex formation", Nucleic Acids Symp Ser, 1997;37:301-2, Oxford University Press, GB	
		FERDOUS et al., "Relative Effects of Graft Copolymer and Polyamines on Triplex Stabilization Under Physiological Conditions", Nucleosides Nucleotides, 1999 Jun-Jul;18(6-7):1651-3, Marcel Dekker Incorporated, US	
		KIM et al., "Acceleration of DNA strand exchange by polycation comb-type copolymer", Nucleic Acids Symp Ser, 1999;42:139-40, Oxford University Press, GB	
		KIM et al., "Comb-Type Cationic Copolymer Expedites DNA Strand Exchange while Stabilizing DNA Duplex", Chem Eur J, 2001 Jan 5;7(1):176-80, Wiley-VCH Verlag GmbH, DE	
		LUO et al., "Synthetic DNA delivery systems", Nat Biotechnol, 2000 Jan;18(1):33-7, Nature America Incorporated, US	
		MAJLESSI et al., "Advantages of 2'-O-methyl oligoribonucleotide probes for detecting RNA targets", Nucleic Acids Res, 1998 May 1;26(9):2224-9, Oxford University Press, GB	

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → **+**

Approved for use
U. S. Patent and Trademark Office:
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it

Citations for New Divisional of Serial
No. 10/020,596
Attorney Docket No. GP123-03.DV1
Page 7 of 8

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/020,596
(use as many sheets as necessary)				Filing Date	December 7, 2001
Sheet	3	of	4	First Named Inventor	BECKER
				Group Art Unit	1648
				Examiner Name	Hill, M.
				Attorney Docket Number	GP123-02.UT

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
		MARUYAMA et al., "Characterization of Interpolyelectrolyte Complexes between Double-Stranded DNA and Polylysine Comb-Type Copolymers Having Hydrophilic Side Chains", Bioconjug Chem, 1998 Mar-Apr;9(2):292-9, American Chemical Society, US			
		MARUYAMA et al., "Comb-Type Copolymers for Controlled DNA Delivery", Nucleosides Nucleotides, 1999 Jun-Jul;18(6-7):1681-2, Marcel Dekker Incorporated, US			
		MARUYAMA et al., "Comb-Type Polycations Effectively Stabilize DNA Triplex", Bioconjug Chem, 1997 Jan-Feb;8(1):3-6, American Chemical Society, US			
		MARUYAMA et al., "Nanoparticle DNA Carrier with Poly(L-lysine) Grafted Polysaccharide Copolymer and Poly(D,L-lactic acid)", Bioconjug Chem, 1997 Sep-Oct;8(5):735-42, American Chemical Society, US			
		MARUYAMA et al., "Poly(L-lysine)-graft-dextran copolymer is a novel stabilizer of triplex DNA (I): stabilization of poly(dA).2poly(dT) triplex", Nucleic Acids Symp Ser, 1997;37:225-6, Oxford University Press, GB			
		MARUYAMA et al., "Preparation and evaluation of ODN conjugates with polycation comb-type copolymer", Nucleic Acids Symp Ser, 1999;42:97-8, Oxford University Press, GB			
		PORSCHKE, "Nature of Protamine-DNA Complexes A Special Type of Ligand Binding Co-operativity", J Mol Biol, 1991 Nov 20;222(2):423-33, Academic Press Limited, GB			
		RENZ et al., "A colorimetric method for DNA hybridization", Nucleic Acids Res, 1984 Apr 25; 12(8):3435-44, Oxford University Press, GB			
		SIKORAV, "Complementary Recognition in Condensed DNA: Accelerated DNA Renaturation", J Mol Biol, 1991 Dec 20;222(4):1085-108, Academic Press Limited, GB			
		TORIGOE et al., "Poly(L-lysine)-graft-dextran Copolymer Promotes Pyrimidine Motif Triplex DNA Formation at Physiological pH", J Biol Chem, 1999 Mar 5;274(10):6161-7, American Society for Biochemistry and Molecular Biology, US			
		TORIGOE et al., "Promotion mechanism of triplex DNA formation by comb-type polycations: Thermodynamic analyses of sequence specificity and ionic strength dependence", Nucleic Acids Symp Ser, 1999;42:137-8, Oxford University Press, GB			
		TRUBETSKOY et al., "Layer-by-layer deposition of oppositely charged polyelectrolytes on the surface of condensed DNA particles", Nucleic Acids Res, 1999 Aug 1;27(15):3090-5, Oxford University Press, GB			
		WAHL et al., "Efficient transfer of large DNA fragments from agarose gels to diazobenzyloxymethyl-paper and rapid hybridization by using dextran sulfate", Proc Natl Acad Sci USA, 1979 Aug;76(8):3683-7, National Academy Press, US			

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → +

Approved for use
U. S. Patent and Trademark Office:

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it

Citations for New Divisional of Serial
No. 10/020,596
Attorney Docket No. GP123-03.DV1
Page 8 of 8

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

4

of

4

Compl te 1.

Application Number	10/020,596
Filing Date	December 7, 2001
First Named Inventor	BECKER
Group Art Unit	1648
Examiner Name	Hill, M.
Attorney Docket Number	GP123-02.UT

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.